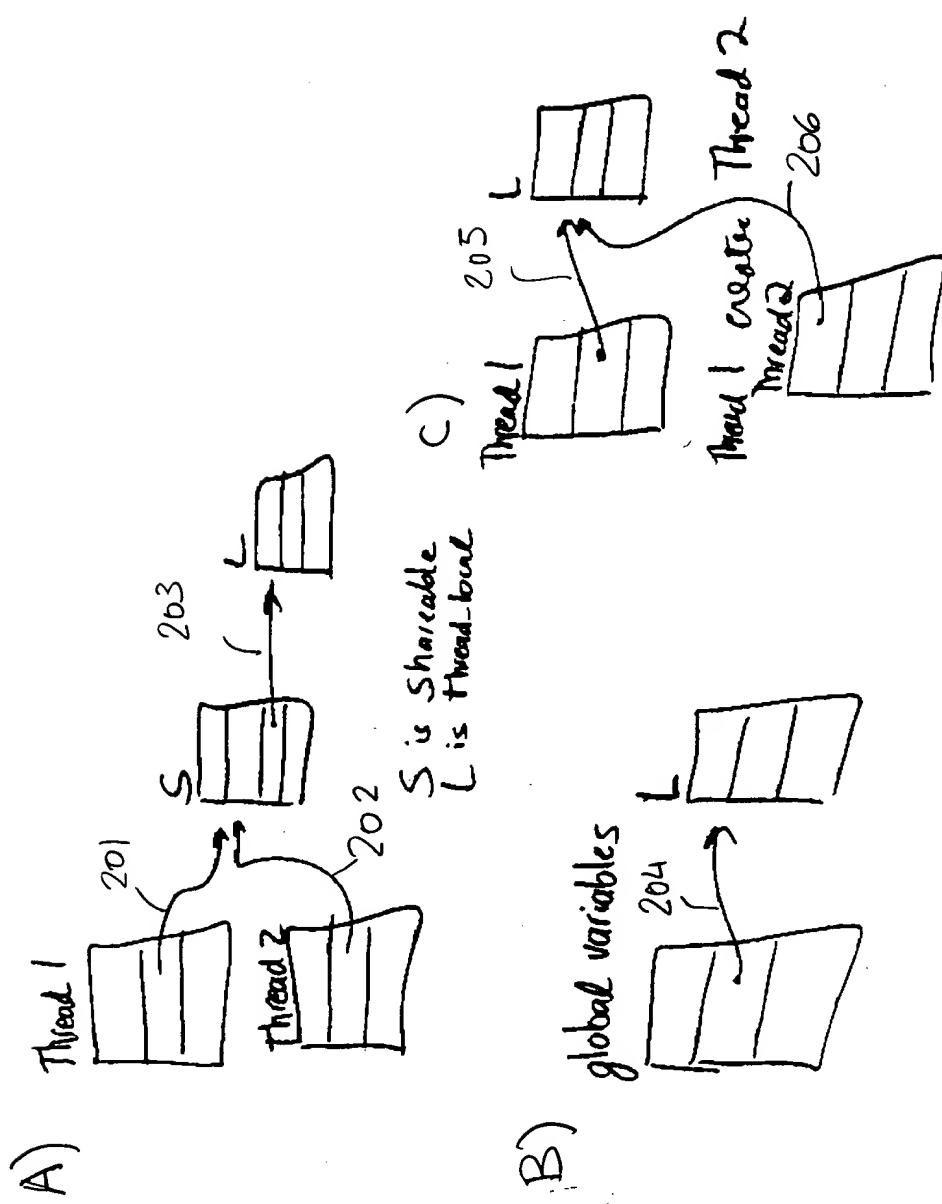


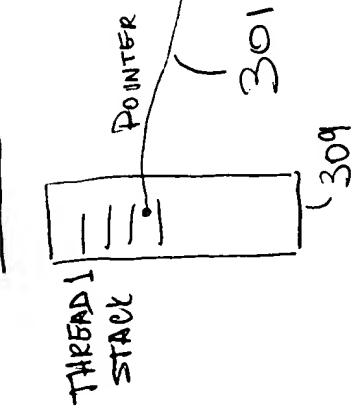
Fig. 1



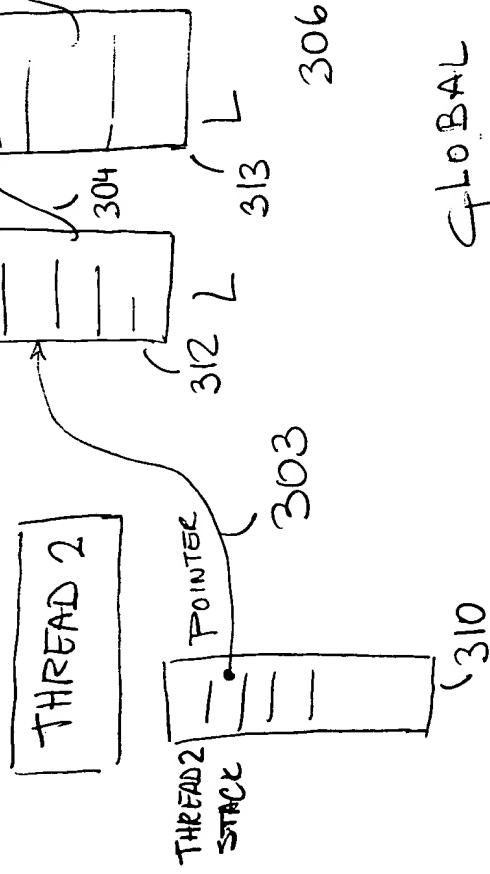
checked at Thread creation points
in program text.

Fig. 2

THREAD 1



THREAD 2



GLOBAL
VARIABLES

L: THREAD-LOCAL

S: THREAD-SHARED

30 - Prog. SOURCE CODE (Annotations)

Fig. 3

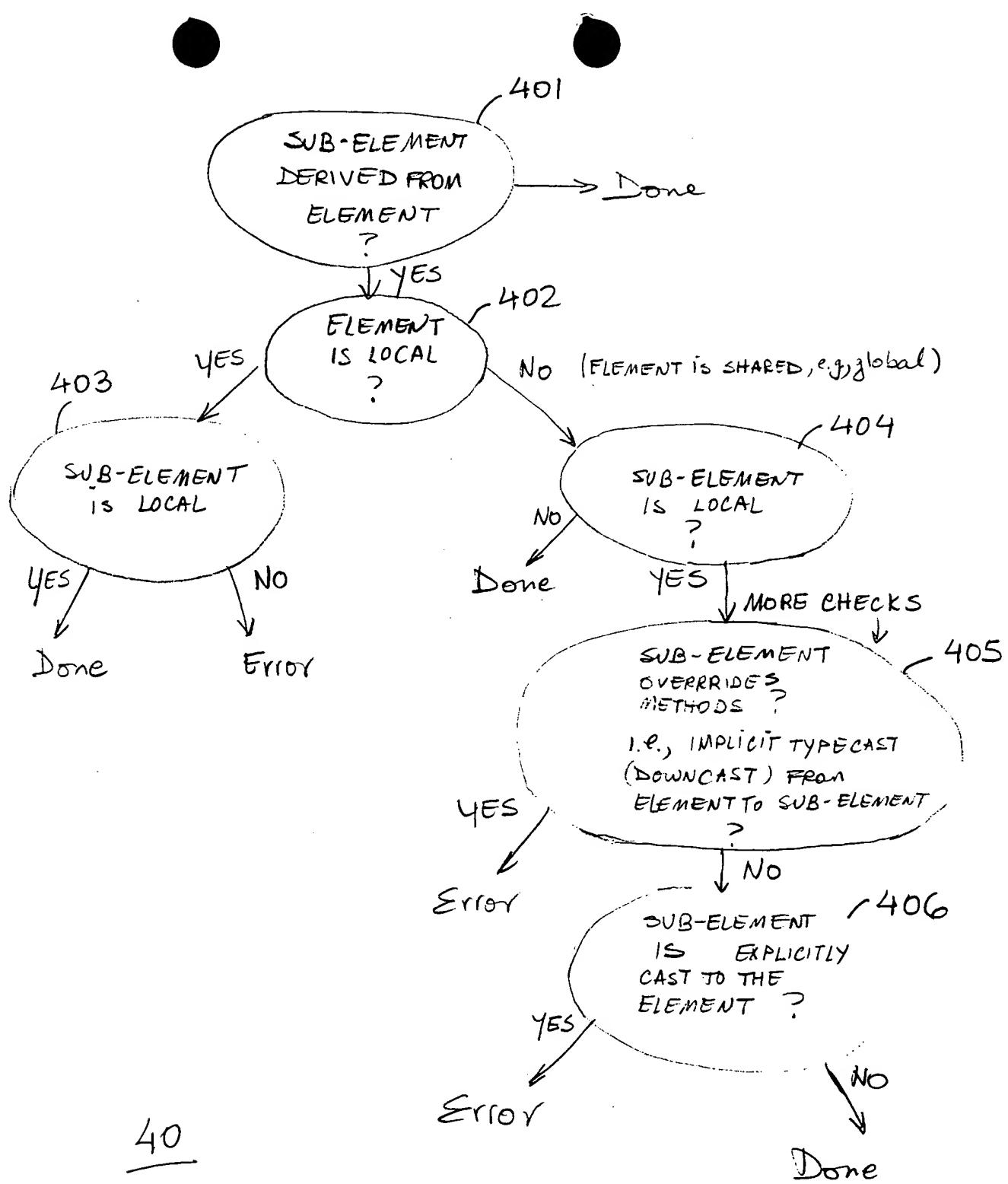
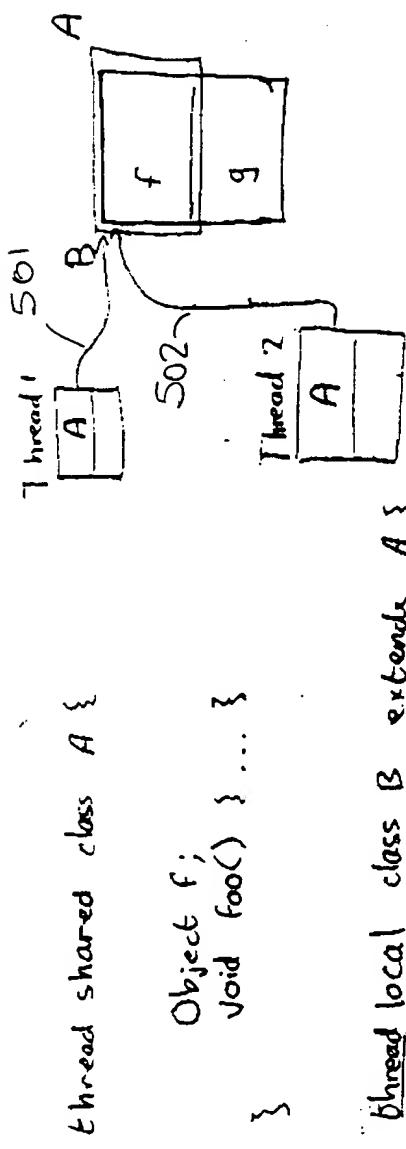


Fig. 4

more checks

↳ <http://www.cs.vu.nl/~klaas/teaching/2010/Java/lectures/07.pdf>



↳ Thread local class B extends A {

```
Object q;
void foo() { ... this.q ... }
```

}

↳ type B

↳ Object q, (by accident)
↳ if no downcasts from A to B

↳ explicit c is of type A

d = (B) c

d.q

↳ implicit

↳ c is of type A (but actually point to o B object)

c.foo();

↳ Create a B object

↳ Cast it to type A

↳ Pass it between threads

↳ Cast it back to type B
↳ and access fields of B.

Fig. 5

error :

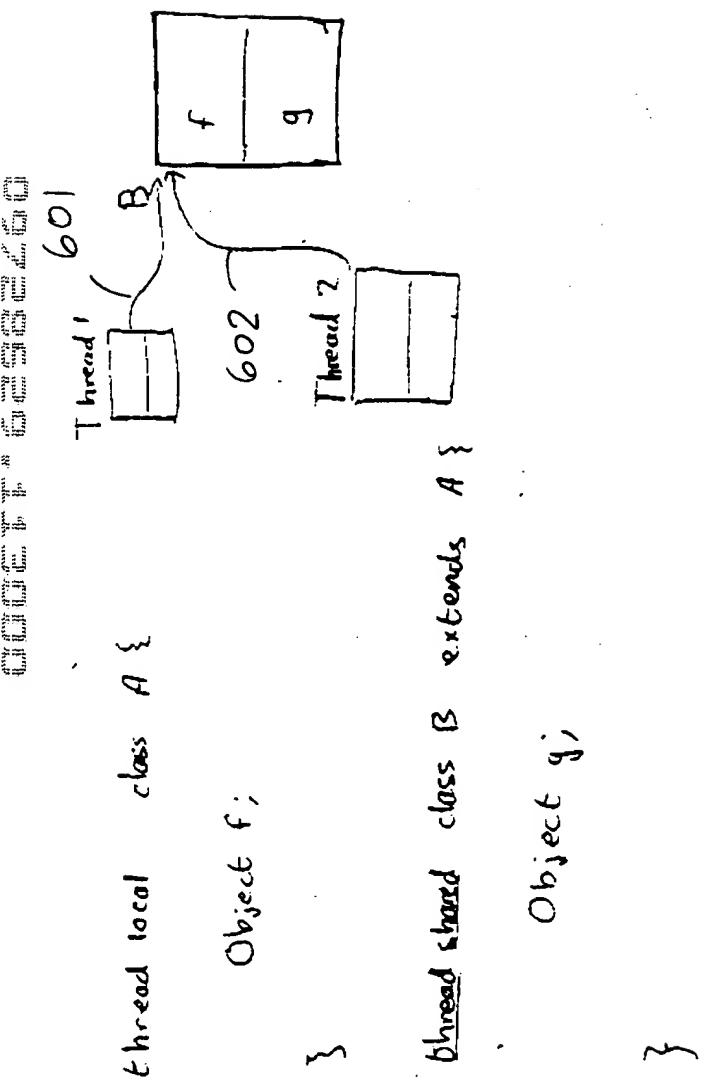


Fig. 6